Acute asthma exacerbations in children: Emergency department management

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General approach: asthma attack could be inducing mortality. Treatment of an acute asthma exacerbation includes administration of inhaled bronchodilators. Supportive care for children with acute asthma exacerbations includes administration of supplemental oxygen and fluids as necessary and frequent monitoring of response to therapy.

Medications: inhaled, short-acting, selective beta-2-adrenergic agonists (beta-agonists or SABAs) are the mainstay of emergent treatment of acute asthma exacerbations. Systemic glucocorticoids are usually added if the symptoms and signs of airway obstruction fail to resolve after the first treatment with inhaled beta-agonists. Children with moderate or severe exacerbations should receive systemic glucocorticoids as soon as possible. Additional pharmacotherapeutic agents that may be indicated in children with moderate or severe asthma include nebulized ipratropium bromide, intravenous magnesium sulfate, and adrenaline. Oxygen therapy needs in many patients with moderate to severe acute asthma exacerbations have hypoxemia as a result of ventilation-perfusion (V/Q) mismatch. Humidified oxygen should be provided as needed to maintain an oxygen saturation of ≥92 percent. Monitoring of respiratory rate, heart rate, oxygen saturation, degree of alertness, accessory muscle use, and retractions is crucial to decisions regarding treatment and disposition .It is rarely necessary to obtain arterial blood gas (ABG) samples in children with acute asthma .

Conclusion: beta 2 adrenergic agonists are the first choice treatment in acute attach asthma.

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